HIGH SCHOOL BUILDINGS

		Student Capacity	Recommended Area in Square Feet
D.	HIGH SCHOOL		
	D1 ART		
	a. Classroom/Laboratory	24	2,000
	b. Storage		500
	c. Kiln Room		400
	d. Wash Area		60
	D2 BUSINESS EDUCATION		
	a. Classroom	24	1,400
	D3 DRIVER EDUCATION		
	a. Classroom	24	850
	b. Laboratory Simulator	20	1,200
	c. Driving Range		400 x 400
	D4 HOME ECONOMICS		
	a. Foods/Nutrition	24	2,000
	b. Clothing/Textiles	24	1,200
	Dressing Room		72
	Laundry Room		80
	Storage		50
	c. Child Development	20	2,000
	d. Conference Room		500
	D5 INDUSTRIAL TECHNOLOGY/INDUSTRIAL ARTS	1/	
	a. Classroom	24	850
	b. Exploration of Industrial Technology Lab		
	Communications Area	24	1,250
	Energy & Power Area	24	1,250
	Materials & Processing Area	24	2,500

NOTE: 1/ Refer to Missouri Industrial Technology Education Guide for specific design details.

	Student Capacity	Recommended Area in Square Feet
c. Communication Technology Lab	24	3,000
Graphic Design and Layout Area	24	1,000
Video Production Area	24	1,000
Graphic Reproduction Area	24	600
Storage Areas	24	800
Darkroom	24	150
Stage Area	24	100
Audio/Video Control Room	24	50
d. Energy & Power Technology Lab	24	3,000
Transportation Systems Area	24	1,500
Mechanical Systems Area	24	800
Electrical Systems Area	24	800
Fluid Systems Area	24	800
Alternative Energy Area	24	800
Storage Area	24	500
e. Materials & Processing Technology Lab	24	2,500
Construction/Manufacturing Processing	24	800
Area	24	400
Design & Production Planning Area	24	400
Project & Product Storage Area	24	400
Material Storage Area	24	200
Finishing Room	24	100
Small Equipment Storage Area		
f. Office Area		150
g. Locker/Dressing/Wash		200/shop
D6 LANGUAGE ARTS		
a. Classroom	24	850
b. Language Laboratory	30	1,200
D7 FOREIGN LANGUAGE		
a. Classroom	24	850
b. Language Laboratory	30	1,200
D8 MATHEMATICS		
a. Classroom	24	850
b. Mathematics Laboratory	30	1,200

	Student Capacity	Recommended Area in Square Feet
D9 MEDIA CENTER – LIBRARY		
a. Reading/Browsing/Seating	2/	40/student 1,800 min.
b. Conference		800
c. Office		125
d. Materials Storage		600
e. Viewing	8	125
f. Work Room		500
g. Storage		500
h. Production Area (teachers & students)		800
D10 MUSIC	3/	
a. Classroom	28	850
b. Vocal	80	1,920 (25/student)
c. Instrumental	80	2,000 (24/student)
d. All Purpose Music Room	80	2,000 (25/student)
e. Practice Room(s)		100
f. Instrument Storage	4/	2/student (500 min.)
g. Uniform/Robe Storage	4/	1/student (500 min.
h. Library – Resource	4/	1/student
i. Office(s)		200

NOTE: 2/ Designed to accommodate 15 percent of the total student enrollment.

3/ Instrumental and vocal music classrooms should have a ceiling height of 12’ to 18’.

4/ Based on maximum size of chorus and band.

	Student Capacity	Recommended Area in Square Feet
D11 PHYSICAL EDUCATION - GYMNASIUM		
a. Gymnasium	5/	7,680
Two teaching stations	60	(80' x 96')
b. Safety Lanes		
Side		8
End		12
c. Spectator Seating	6/	3/seat
d. Service Area – Lobby		800
Women's Toilet		400
Men's Toilet		300
Concession Booth		150
Trophy Display		75
e. Multipurpose Room Boys and/or Girls	40	2,400
f. Weight Room	40	1,000
g. Gymnastics	40	1,200
h. Wrestling	20	1,000
i. Dance	40	1,000
j. Indoor Swimming Pool	40	45 x 75
Safety Lanes		
End		12
Side		8
k. Laundry		200
l. Storage		
General		300/teaching station
Equipment		300/teaching station
Outdoor		adjacent to fields

NOTE: 5/ The clear ceiling height should not be less than 22 feet, preferably higher if basketball backboards are raised for volleyball games.

6/ Seating should be based on the projected number of spectators. Folding bleacher seating is recommended.

	Student Capacity	Recommended Area in Square Feet
m. Shower, Girls	7/	2/student
n. Shower, Boys	7/	2/student
o. Drying, Girls	7/	1/student
p. Drying, Boys	7/	1/student
q. Locker/Dressing, Girl's P.E.	7/	24/student
r. Locker/Dressing, Boy's P.E.	7/	24/student
s. Locker/Dressing, Girls Athletics	7/	24/student
t. Locker/Dressing, Boys Athletics	7/	24/student
u. Toilet, Girls		2/student
v. Toilet, Boys		2/student
w. Health Classroom		850
x. Offices		100/staff-member

NOTE: 7/ Space should be designed to accommodate largest number of students using the facility at one time.

y. Outdoor Activities

1) multipurpose, hard-surfaced area – all weather area for basketball, volleyball, badminton, other court games, and handicapped student use.
2) track and field
3) football
4) soccer
5) softball
6) baseball
7) archery
8) tennis
9) general purpose-practice areas, other field games

A breakdown of outdoor spaces needed in a 950 student, middle school:

Area	Recommended Dimensions (in feet)	Space Required Sq. Ft.	Number Required	Total Required Sq. Ft.
Multipurpose	100 x 120	12,000	2	24,000
Track and Field	260 x 590	153,400	1	153,400
Football	160 x 360	57,600	2	115,200
Soccer	225 x 360	81,000	2	162,000
Softball	275 x 275	75,625	4	302,500
Baseball	350 x 350	122,500	2	245,000
Archery	90 x 225	20,250	2	40,500
Tennis	45 x 100	4,500	8	36,000
General Purpose	100 x 200	20,000	2	40,000
			Total	1,118,600

The above square footage does not include buffer zones to allow for flow-through traffic, fencing, storage, parking, bleachers, or additional areas based on program needs, greater enrollment or community use. These areas will add considerably more acreage (30-50%) to the above total. Stadiums, field houses, or hockey arenas require much additional space. Junior high schools, six year high schools and/or smaller enrollment schools might vary the number and size of some of the above areas.

	Student Capacity	Recommended Area in Square Feet
D12 SCIENCE		
a. Classroom	24	850
b. Language Laboratory	24	1,000
c. Chemistry Laboratory	24	1,000
d. Earth Science	24	1,000
e. General Science	24	1,000
f. Physics Laboratory	24	1,000
g. Zoology Laboratory	24	1,000
h. Multipurpose including storage	24	1,800
i. Storage		350/lab
j. Preparation Room		100/lab
D13 SOCIAL STUDIES		
a. Classroom	24	850
b. Social Science Laboratory	30	1,100
D14 SPECIAL EDUCATION	8/	
a. Mental Retardation		900
b. Specific Learning Disabilities		900
c. Behavior Disorders		900
d. Physically & Other Health Impaired		1,000
e. Visually Impaired		900
f. Hearing Impaired		900
g. Speech/Language Disorders		900

NOTE: 8/ Standards and approvable caseloads determined by the Coordinator of Special Education, Missouri Department of Elementary and Secondary Education.

	Student Capacity	Recommended Area in Square Feet
h. Multiply Handicapped		1,000
i. Deaf/Blind		900
j. Autistic		900
k. Severely Handicapped		1,000
l. Early Childhood Special Education		1,200
D15 COMPUTER LABORATORY	9/	1,200
D16 REMEDIAL EDUCATION		850
D17 GIFTED EDUCATION		850
D18 VOCATIONAL EDUCATION		
a. Classroom	24	850
b. Air Conditioning and Refrigeration	24	2,000
c. Auto Body Repair	24	4,000
d. Auto Mechanics	24	4,000
1) Specialization Areas		1,000
e. Building Trades	24	3,000
f. Cosmetology Laboratory	24	1,400
g. Marketing Education	24	1,200
h. Cooperative Vocational Education	24	1,200
i. Cabinetmaking	24	3,000
j. Commercial Art	24	2,000
k. Cosmetology	24	2,500
l. Diesel	24	4,000
m. Drafting	24	2,000
n. Electronics	24	2,000

NOTE: 9/ The AC power supplies should be provided for each station on a master control switch. There should be at least one telephone line into the lab to facilitate access to external data sources. Either tile or special static-free carpet should be used to prevent static electricity.

	Student Capacity	Recommended Area in Square Feet
o. Electrical Trades	24	2,000
p. Graphic Arts	24	3,000
q. Health Services Assistant	20	1,500
r. Masonry	24	2,000
s. Machine Tool	24	3,500
t. Small Engines	24	2,500
u. Welding	24	3,000
v. Agricultural Education		
General Instructional Area	18	850
General Shop Area	18	3,500
Classroom Laboratory	18	100
Agriculture Sales/Service	24	1,000
Landscape Horticulture		2,400
Greenhouse	24	800
w. Conference/Library		350/2 shops
x. Toilet/Locker/Shower		300/shop
y. Tool Room		200/shop
z. Materials Storage		200/shop
D19 ADMINISTRATION		
a. Principal's Office		200
b. Assistant Principal's Office (each)		175
c. Secretary and Waiting Area		400
d. Clerk's Office		125
e. Storage		200
f. Workroom		250
g. Conference		450
h. Communications Control, Mail		150

	Student Capacity	Recommended Area in Square Feet
i. Vault		150
j. In School Suspension		350
k. Duplication		150
l. Scheduling		250
m. Toilets		100
D20 HEALTH SERVICES		
a. Examining Area		100
b. Cot Area		100
c. Nurse Office		100
d. Toilet (40 sq. ft. each sex)		80
e. Storage		150
D21 GUIDANCE SERVICES		
a. Counselor's Office		150
b. Reception/Resource		250
c. Secretarial		150
d. Testing Area		150
e. Records Storage		150
f. Conference Small Group		250
g. Career Information		400
D22 AUDITORIUM		
a. General Seating	10/	7/student
b. Stage		3,000
c. Storage		500
d. Dressing		500

NOTE: 10/ Based on maximum number of spectators projected.

	Student Capacity	Recommended Area in Square Feet
D23 CUSTODIAL		
a. Office/Storage		150
b. Materials/Equipment Storage	11/	.3/student
c. External Storage (Grounds Equipment – Flammable Material)		250
D24 FOOD SERVICE	12/	
a. Dining	13/	15/student
b. Staff Dining (optional)		500
c. Dishwashing		300
d. Dry Storage		350
e. Kitchen		850
f. Nonfood Storage		250
g. Refrigeration		250
h. Serving Line		400
i. Sink and Clean		50 each
j. Rest Room		100
k. Office		100
l. Receiving Dock, Waste Holding Area		150

NOTE: 11/ A custodian's service closet, including sink, should be provided on each floor of the building, convenient to general toilets, one for about each 7,500 to 10,000 square feet of floor area.

12/ Refer to Missouri Department of Health rule governing food service sanitation and the Missouri Department of Elementary and Secondary Education, School Food Services requirements.

13/ Based on 100 percent student enrollment—three lunch periods. Use as a minimum 200 students.

	Student Capacity	Recommended Area in Square Feet
D25 RESTROOMS		
a. Boys	14/	/student
b. Girls	14/	/student
c. Water Closets		
1. Boys	1 to 90	
2. Girls	1 to 30	
d. Urinals	1 to 30	
e. Lavatories	1 to 45	
f. Drinking Fountains 15/	1 to 75	
D26 WORKROOM		
a. Faculty Room		200
b. Rest Room (1 each sex)		50

NOTE: 14/ Based on 50 percent of total student enrollment.

15/ Drinking fountains shall not be installed in restrooms

D27 TABLE OF WORKING HEIGHTS

	MIDDLE			
	9	10	11	12
Chalk Rails	32”		34”	
Drinking Fountains (Floor to Nozzles)	28”		34”	
Guardrails (minimum requirement	3 ½”			
Handrails (nosing to rail) Stairways, fire escapes	32”		32”	
Lavatories	28”		30”	
Water Closets (floor to rim)	13”		15”	
Work Counters	32”		36”	
Urinals (floor to rim)	20”		22”	

D28 LIGHTING

	Recommended Foot Candles of Illumination
a. Classrooms, Libraries, Offices	60
b. Drafting, Art, Keyboarding	80
c. Music, Seminar Rooms	60
d. Gymnasium, Multipurpose Rooms	50
e. Corridors, Service Areas	30

		Recommendations
D29 CORRIDORS		
a. Construction		fire-resistive in, walls, floors and ceilings
b. Width		
1. Single-loaded corridors		
a. no lockers or storage		8 feet
b. lockers or storage on one side		10 feet
c. lockers or storage on both sides		12 feet
2. Double-loaded corridors		
a. no lockers or storage		9 feet
b. lockers or storage on one side		10 feet
c. lockers or storage on both sides		12 feet
D30 EXTERNAL AREAS		
a. Walks		6’ Wide
b. Parking Spaces		9’ Wide 17’ Long
1. One space for each faculty, staff and support service member		
2. One space per 10 student capacity		
D31 BUS GARAGES		
a. Work bays		16’ Wide 50’ Long
b. Doors	16/	14’ Wide 12’ High

NOTE: 16/ Bays should have doors at each end.